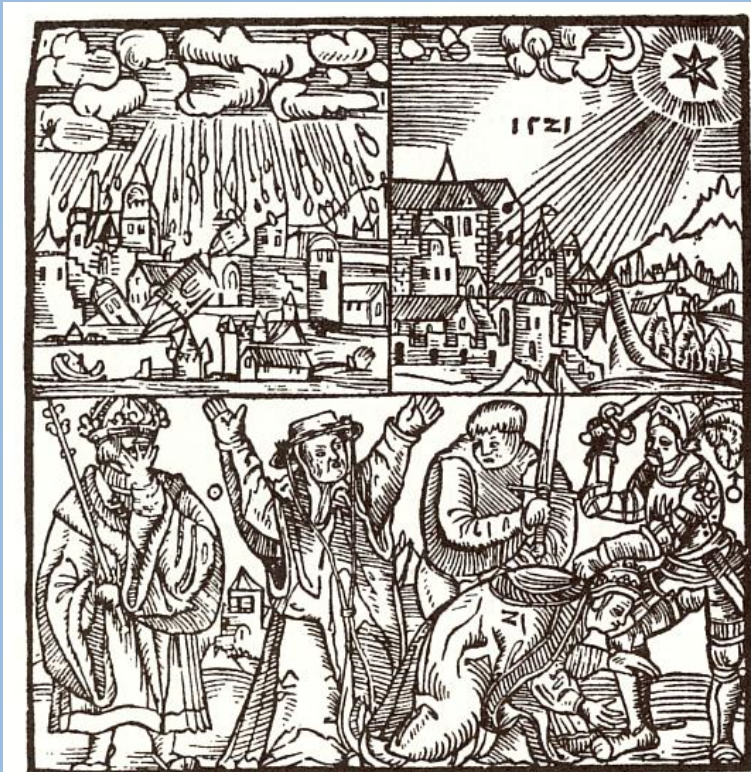


# Between astrological divination and local knowledge: Prognostics and „epignostics“ related to natural disasters in the Middle Ages

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# Outline

- General considerations
  - What is a disaster?
- Disaster explanation between prognostics and “epignostics”
  - Disasters as “markers” of a bad reign
  - Disasters as “portents” of the Last Judgement
  - Comets, eclipses and specific planetary/stellar constellations as the “reason” of natural disasters and diseases
  - An astrological dispute: the announced “deluge” of 1524
- Conclusions

## From natural hazards to (natural) disasters

- Dis-aster: a “corruption of the stars”
- Parameters to perceive a (natural) hazard as disaster
  - The helplessness of the people trying to cope with the damage with the available means
  - The inability of individuals to explain and understand the event
  - The material and personal suffering
  - The unexpectedness of the event, which depends on how prepared a society is for one-time or recurrent threats
  - Whether there is a series of natural hazards within a short period of time, which can raise the vulnerability of the afflicted people
  - The symbolic connotations and patterns of interpretation, such as connections to natural disasters described in the Bible
  - The general predicament, such as a simultaneous economic, religious and climatic crisis (e.g. mid-14<sup>th</sup> c., around 1520)

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## Disaster explanations between prognostics, “epignostics” and local knowledge

- Disasters as “markers” of bad rulers
  - Gregory of Tours: *Historiarum libri X*
- Disasters as “portents” of the Last Judgement
  - Locust invasions in the Late Middle Ages
- Comets, eclipses and specific planetary/stellar constellations as the “reason” of natural disasters and diseases
  - The crises of the 1310s and of the mid-14<sup>th</sup> century
  - Konrad of Megenberg: *Buch der Natur*
- An astrological dispute: the announced “deluge” of 1524
  - Astrological discourses in a time of change

## Disasters as “markers” of bad rulers

### Gregory of Tours: *Historiarum libri X* (1)

- Gregory of Tours (around 538-594)
  - Descendant of a Roman provincial senator family
  - Bishop of Tours
  - *Historiarum libri X*
    - Books 5-10: reliable contemporary history
  - *De cursu stellarum ratio*
- Natural phenomena and disasters in Books 1-4
  - Short, annalistic reports on earthquakes between 463 und 484
  - Civil war between the brothers Childeric I and Theudebert I against Chlothar I (534): tempest during a battle in favour of Chlothar
  - Cosmic signs and extreme weather as portents
  - Flash flood of the Rhone River near Tauredunum (naar Martigny, Valais) in 563 caused by a large landslide

# Disasters as “markers” of bad rulers

## Gregory of Tours: *Historiarum libri X* (2)

- Natural phenomena and disasters in Books 5-10
  - Strictly chronological reporting year by year
  - Final summarizing chapter for nearly every year
    - Diseases
    - Weather anomalies
    - Cosmic signs
    - Natural disasters, animal plagues, other catastrophes
- Books 5-6 on the reign of Chilperic I (561-584) (*Nero nostri temporis et Herodis*)
  - Numerous natural phenomena and disasters as “markers” of the wickedness of Chilperic’s reign
  - Floods, earthquakes, urban fires, droughts, diseases
- Books 7-10: nearly no reference between natural disasters and political events



## Locust plagues in the Bible and their impact on pre-modern documentary sources

- Locust invasions in the Bible
  - Eighth Biblical Scourge of the Egyptians (Exodus 10)
  - Extensive report in the Book of Joel (Joel 1-2)
  - Locust invasion when the fifth messenger sounds in the Book of Revelation (Revelation 9)
- Locust invasions, seen as a scourge of God and a portent of the Last Judgement
  - *Vita Caroli Quarti* on the locust invasion hitting an army of the later-on King Charles IV near Pulkau (Lower Austria) in August 1338:  
“*in ortu solis unus militum suscitavit nos de sompno dicens: Domine surgatis, dies novissimus adest, quia totus mundus plenus est locustis.*”
- Reports on locust invasions closely follow biblical patterns
- Locusts perceived as catastrophe even if the real damage was not disastrous



# The locust plague of the 1470s

- Dissemination of the locusts
  - First series of invasions to the Czech Lands in 1474-1475
  - Second series of locust invasions to Styria, Carinthia, Northern Slovenia and Southern Tyrol in 1477-1480
  - Locusts follow the Alpine valleys
- Accumulation of “apocalyptic plagues” 1479/1480 in Styria and Carinthia
  - Invasions of Hungarian and Ottoman troops
  - Black Death
  - Locust invasion
- Comparison with the apocalyptic riders (war, hunger, plague, all together leading to death)
  - Fresco at the outer wall of the cathedral of Graz (around 1485)

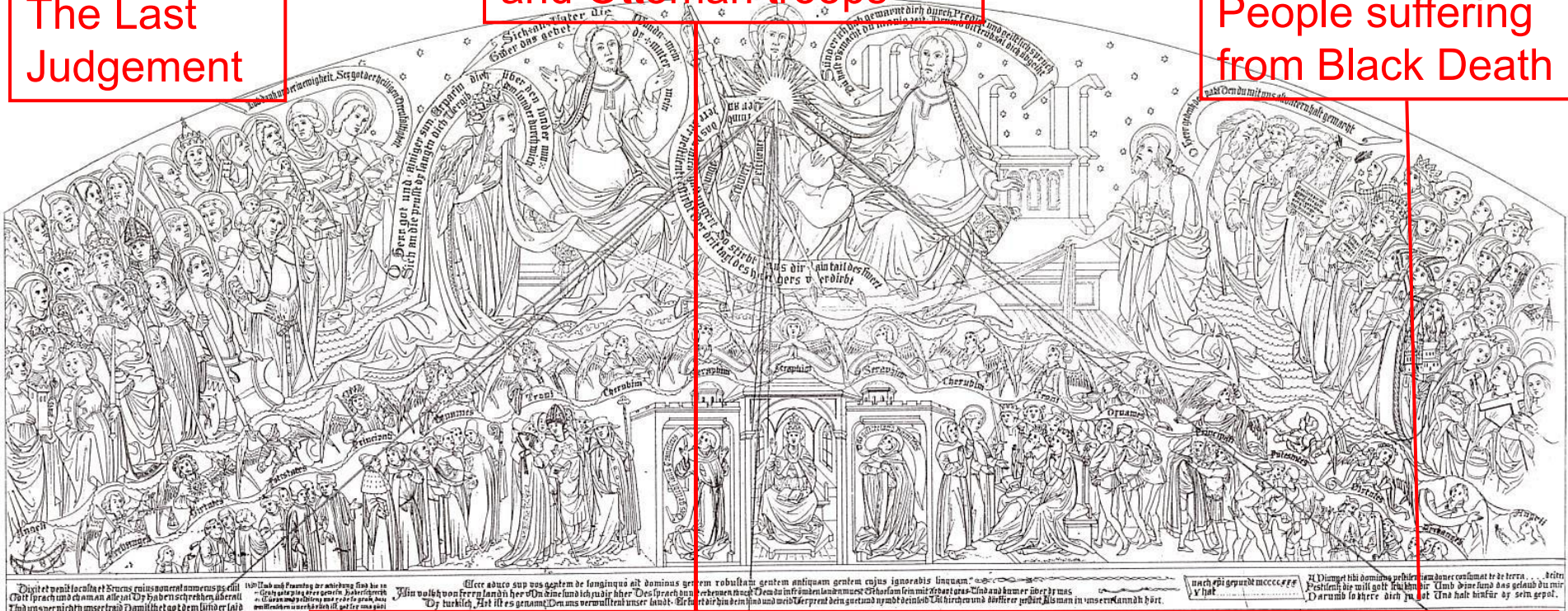
# Locust invasion in Styria 1480

## Fresco, cathedral of Graz (Thomas of Villach, 1485)

The Last  
Judgement

Invasions of Hungarian  
and Ottoman troops

People suffering  
from Black Death



Locusts





# Locust invasion in Styria 1480

## Fresco, cathedral of Graz (Thomas of Villach, 1485)

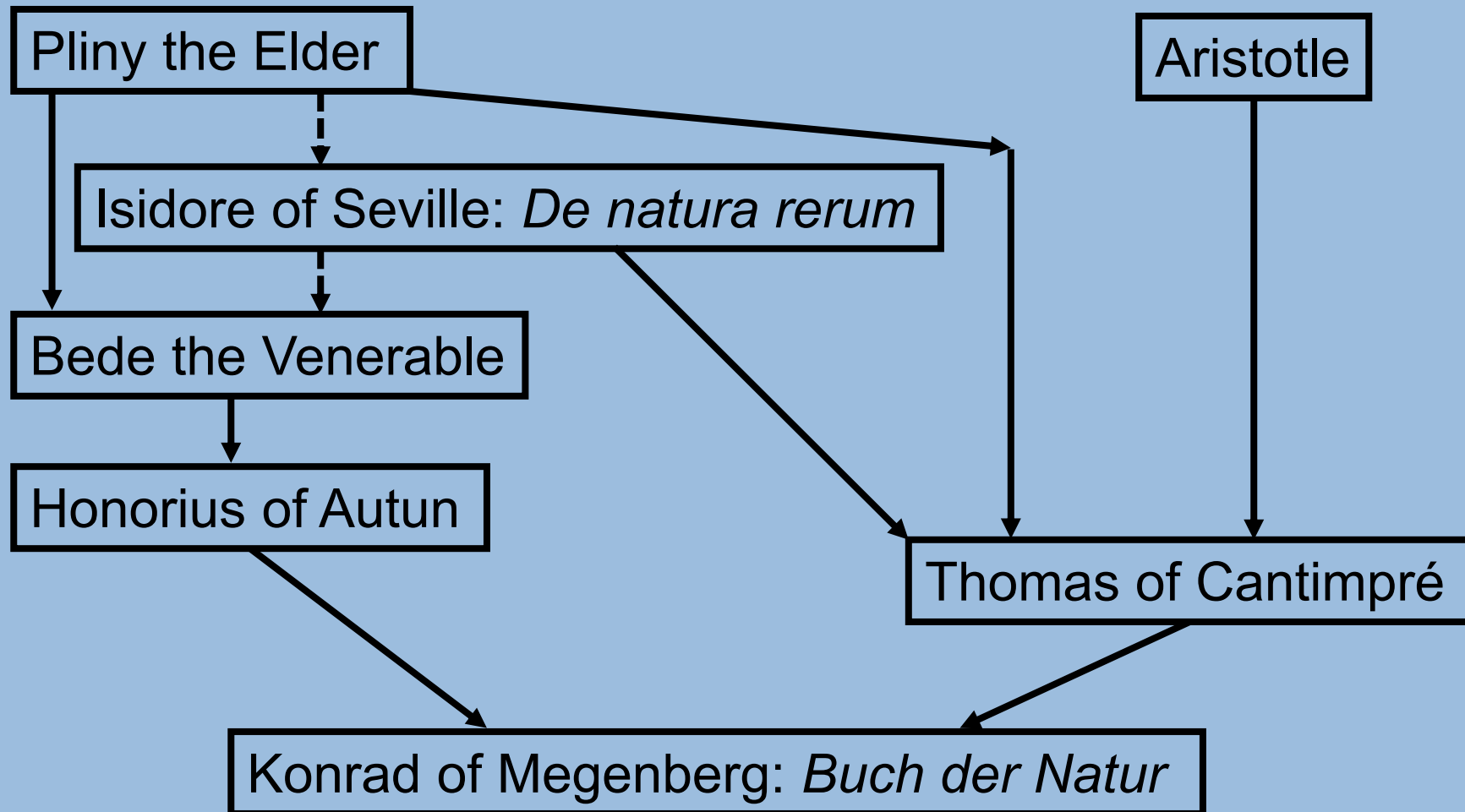


# Comets, eclipses and specific planetary/stellar constellations

- Comets
  - “The” bad sign announcing disasters of all kind (e.g. 1316, 1337)
  - “Natural” explanations since Greek/Roman times
  - *Signa apparuerunt, quae aut regis obitum adnunciare solent aut regiones excidium* (Gregory of Tours: *Historiarum libri X* 9,5)
- Solar and lunar eclipses
  - More common, but still seen as portent
  - Events to be documented (in particular, in times of crisis)
  - In many cases connected to floods, droughts, diseases, bad harvests (e.g. Francis of Prague: *Continuatio Chronicae Aulae Regiae*)
- Specific planetary/stellar constellations
  - E.g. Saturn entering the zodiac of Capricorn (1341)
  - High sensitivity in times of crisis
  - Also used for short time predictions (e.g. millennium floods of 1342)

# Comets, eclipses and specific planetary/stellar constellations

## Knowledge transfer from Pliny to Konrad of Megenberg



# Konrad of Megenberg and his background

## Life and works

- Life
  - Born 1309 in Mäbenberg near Nuremberg (Franconia)
  - Studies at the Sorbonne university (master degree)
  - 1334-1342 teaching activity in Paris
  - 1342-1348 teacher at St Stephen's school in Vienna
  - From 1348 onwards canon in Regensburg
  - Died 1374
- Major works
  - 22 works, mostly written between 1348 and 1354
  - Theological treatises
  - Political treatises
  - Moral philosophical treatises
  - *Yconomica*
  - *Buch der Natur* (Book of Nature)

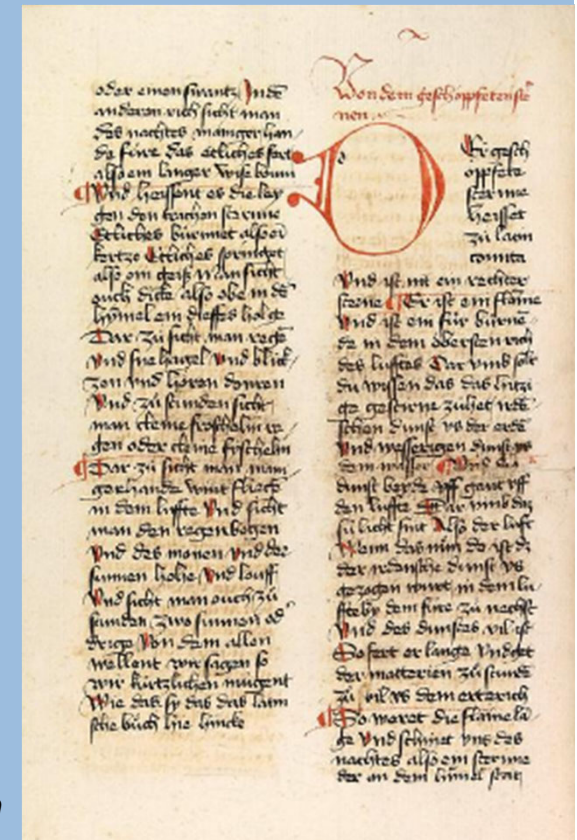
# Konrad of Megenberg and his background

## The *Buch der Natur* (Book of Nature)

- Sources
  - Free adaptation of Thomas of Cantimpré's *Liber de natura rerum* (20 books, 1225-1241)
  - Aristotle (via Thomas of Cantimpré)
  - Pliny the Elder
  - Isidore of Seville
  - Bede the Venerable
- Aristotelic and scholastic thought in a vernacular language
- Popular opinions inserted and partly criticized
- Explanation of current events
- Explicitly directed to a lay readership

Heidelberg, Cod. Pal. Germ. 300, fol. 50v, around 1442/48:

*Von dem geschöppfeten stern*





# Konrad of Megenberg and his background

## The *Buch der Natur*: explaining natural hazards (1)

- Natural hazards connected with
  - Comets
  - Specific stellar constellations
  - Solar and lunar eclipses
- Aristotelic *pneuma* theory used to explain comets
  - Comets are caused by humid vapors in the atmosphere
- The comet of 1337
  - Direct consequences
    - Dry weather and hunger in some areas
    - Locusts arising from humid seeds (1338-1341)
  - Further consequences
    - Earthquakes (1348), followed by diseases and Black Death

## Konrad of Megenberg and his background

### The *Buch der Natur*: explaining natural hazards (2)

*Buch der Natur* II, 11: On comets (and locust invasions)

*“Der geschopft stern haizet ze latein cometa und ist niht ain rehter stern: er ist ain flamm und ain feur prinnend in dem obristen reich des luftes. dar umb scholt dû wizzen, daz daz hitzig gestirn an dem himel zeuht irdischen dunst auz der erden und wässerigen dunst auz dem wazzer und die dünst paide gênt auf in den luft, dar umb daz si leiht sint sam der luft. wenne nu daz ist, daz ain irdischer vaizter rauch aufgezogen wirt in den luft, sô enzündet er sich oben in dem luft bei dem feur ze næhst, und ist des dunstes vil, sô wert diu flamm lang, und gêt der materi ze stunden vil zuo auz dem ertreich, sô wert diu flamm lang und scheint uns des nahtes als ain stern, der an dem himel stêt, reht als ainer, der bei dunkelr naht reitt und verren siht ain lieht, den dunket daz lieht ain stern sein. ... **der stern bedäut hungerjâr in dem land, dâ er den schopf hin kêrt, dar umb, daz diu fäuchten auz dem ertreich ist gezogen ... und koment oft dâ mit vil kefern und häuschrecken. ...**”*

## Konrad of Megenberg and his background

### The *Buch der Natur*: explaining natural hazards (3)

*Buch der Natur* II, 11: On comets (and locust invasions)

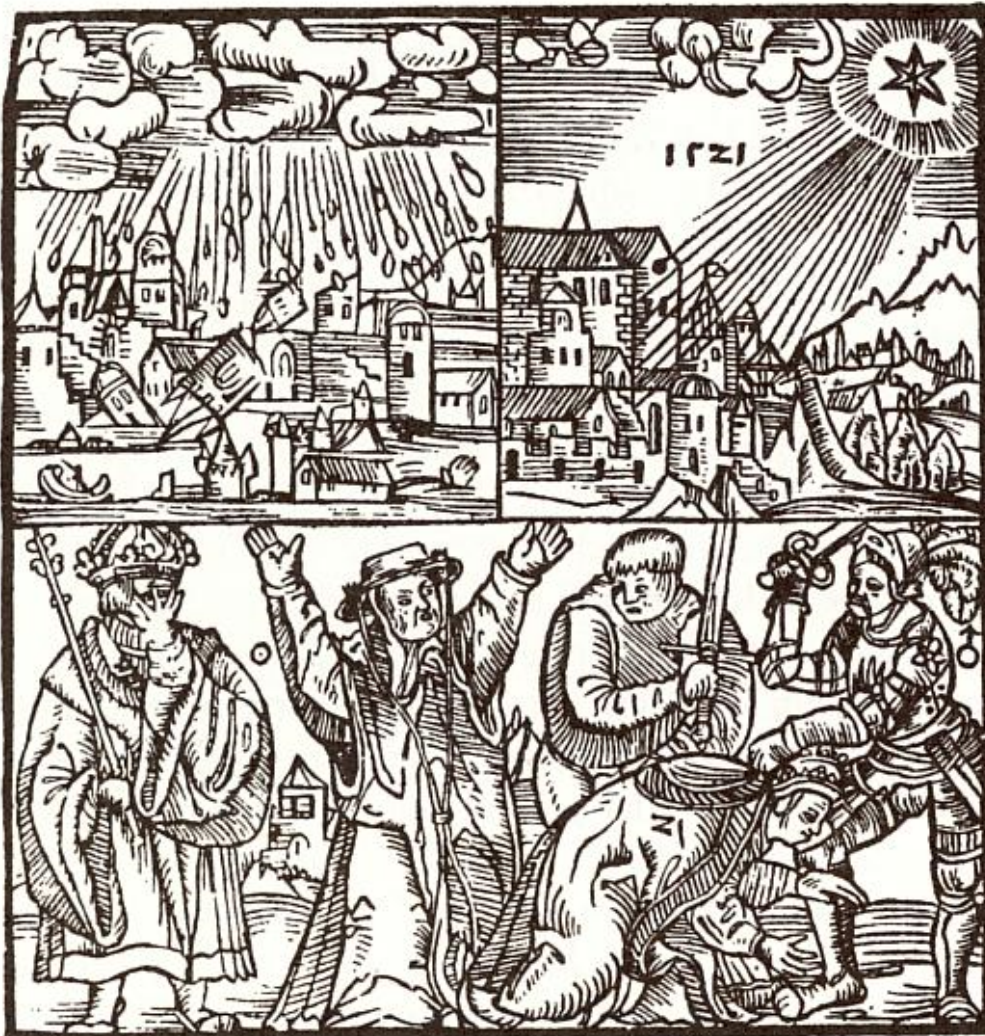
“... *alsô sach ich ainen comêten ze Pareis, dô man zalt von gotes gepürt dreuzehenhundert jâr und siben und dreizig jâr*, der werte mêr denne vier wochen und stuont gegen dem himelwagen und het den sterz gekêrt gegen dâutschen landen und wegt sich mit ainr überwertigen wegung gegen mittem tag, unz er verschiet. dô was ich gar junk und prüeft doch allez, daz dâ nâch geschach, wann dâ nâch kürzleich kom ich her auz in dâutscheu lant, *dô kâmen sô vil häuschrecken geflogen von Ungern durch Oesterreich und durch Paiern auf über den Sant den Main ab gegen dem Rein, daz si sô vil getraides verderbten auf dem veld, daz manich gäuman verdarb*. daz geschach dâ von, daz der stern kraft daz wüest lant in Preuzen und an etsleichen steten in Ungern, dâ ez hüelich was und mosich, beraubte seiner behenden fäuhten und liez die gerben dâ, auz den wart ain fäuhten und ain sâm, dar auz die häuschrecken wurden. ...”

## **An astrological dispute: a new deluge in 1524?**

- Increasing influence of astrologers at the courts of the 15<sup>th</sup> c.
  - Apocalyptic prophecies in the tradition of the Toledo Letters (John of Toledo for 1186)
  - Regiomontanus (Johannes Müller) on 1454
  - Johannes Lichtenberger on 1484
- Prophecies for a new “deluge” in 1524
  - Based on Johannes Stoeffler (1499)
  - 16 planetary conjunctions in the zodiac of Pisces
  - Johann Carion (astrologer at the Brandenburg court, 1521): announcement of a large flood in 1524
  - More than 150 printed treatises by 59 authors arguing pro or contra Carion
- 1524 became a remarkably dry year
  - Polemic comments towards astrology in general



## An astrological dispute: a new deluge in 1524?



Miraculous portents announcing a new deluge in 1524.  
Wood carving from Johann Carion: *Prognosticatio vnd erklerung der grossen wesserung, auch anderer erschrockenlichenn würckungen. So sich begeben nach Christi vnsers lieben hern geburt funfftzehen hundert und(d) xxiii Jar etc.*, Leipzig 1521.

## Conclusions

- Close connection between prognostics and disaster explanation
  - In most cases rather “epignostics” (causal relationship constructed *ex post*)
  - Stars as the reason for natural hazards, diseases, war (“dis-aster”)
  - Parallel scholarly explanations based on the antique authorities
- Astrological interpretations even increase at the beginning of the Early Modern Period
  - Re-establishment of antique prognostic traditions in the Renaissance?
  - Increased insecurity due to religious, political and climatic crises?

**Thank you for your attention!**

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